Council on Postsecondary Education
July 22, 2002

Statewide Engineering Strategy Update

In response to the need for more engineers in Kentucky, the council approved the "Strategy for Statewide Engineering Education in Kentucky" in July 2000. The strategy called for creation of joint engineering programs providing the education and training needed for Kentuckians to excel in the knowledge-based economy. Nationwide, engineering bachelor's degrees peaked in 1985 and have been falling steadily since, despite the rising number of students attending college. The shrinking pool of engineers is causing shortages of qualified candidates for jobs in computer-aided design, integrated circuit design, research and development in digital wireless technology, materials engineering, medical device design, and biochemical engineering. Practicing engineers are aging, and few young people are being trained to take their place.

Kentucky's statewide engineering strategy eventually will integrate secondary, baccalaureate, and post-baccalaureate programs. It will involve secondary schools, the Kentucky Community and Technical College System, the comprehensive universities, the research universities, the independent colleges and universities, and the Kentucky Virtual University. However, since the strategy was adopted, the principal focus has been to develop four joint engineering programs. The University of Kentucky and Western Kentucky University now offer degrees in mechanical and civil engineering, the University of Louisville and WKU offer a degree in chemical engineering, and UofL and Murray State University offer a degree in electrical and telecommunications engineering. Implementing a fifth program in environmental engineering between UK and MuSU has been delayed until additional funding is secured.

The provosts from UK, UofL, MuSU, and WKU; the deans from the UK and UofL schools of engineering and WKU's Ogden College of Science, Technology, and Health; and the council staff formed a workgroup and meet regularly to discuss and resolve issues that could impede statewide engineering success. The institutions have developed procedures for counting enrollments and graduates, disbursing funds, and establishing tuition rates. They have agreed on appointment, tenure, and promotion policies for program faculty; equipment and facility allocation; provision of student services; assessment criteria; criteria for distance-learning courses; and general management of the joint programs. The institutions and council staff have worked with the Accreditation Board for Engineering and Technology to ensure the joint programs are accredited.

The council staff also has convened meetings with engineering faculty, representatives from secondary schools, and the Kentucky Department of Education to develop a strategy to prepare and recruit students into engineering. This plan includes initiatives to recruit, mentor, and place women and minorities in engineering programs.

The central, continued threat to fully implementing the engineering strategy is lack of recurring funding. The council and the institutions funded the first year of the joint programs from internal

reallocation and non-recurring sources, and the council agreed in July 2000 and again in October 2001 to secure recurring state General Funds. The council's 2002-04 budget recommendations included $3 million in recurring funds. The Governor's executive spending plan includes $1 million in non-recurring funds.

The institutions and the council will continue to seek recurring funds and will continue implementation of the engineering strategy for the next two years with non-recurring funds. However, institutions have said they cannot continue to offer joint programs if they must depend on non-recurring funds. They are wary of committing additional resources to program development until recurring funding is assured. If the joint degrees cannot be supported with recurring funds by 2004, the institutions have indicated the joint programs cannot be continued in their current form.

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